AUTOMATIC OPERATION CONTROL SYSTEM USING PLC APPLICATION IN PRODUCTION LINE OF ABO-SLEEM'S FACTORY

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INTRODUCTION

1.1 Introduction

Programmable logic control (PLC) is important because all production processes go through a fixed repetitive sequence of operations that involve logical steps and decisions. A PLC is used to control time and regulate the sequence (Barrett, 1997). The PLC is a robust industrial computer program which accepts input data, both digital and analogue, from switches and sensors and controls outputs to drive devices such as motors, pneumatic devices and status indicators (Hughes, 2005).

The need for low-cost, versatile and easily commissioned controller has resulted in the development of programmable systems based on hardware CPU (Central Processing Unit) and memory for the control of machines or processes. Originally designed as a replacement for the hard-wired relay and timer logic, PLCs (Programmable Logic controllers) provide ease and flexibility of control based on programming and executing simple logic instructions (often in ladder diagram form). PLCs have internal function such as timer, counters and shift registers, making sophisticated control possible using even the smallest PLC.

The idea of PLCs was developed for the first time in the General Motors Company in 1968 and put into practice in 1969 in response to the wishes of an automobile industry to develop an automated production line which could keep with technical evolution and with new production models. Since that time they have became firmly established as the most popular means of

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